

Gravatt, Dan

From: Beringer, Mike
Sent: Monday, June 23, 2014 1:31 PM
To: Hayes, Scott; Monnig, Rob; Johnson, James; Nold, Eric; Phillips, Todd; Davis, Michael; Gravatt, Dan; dkinroth@seagullenvirotech.com; Tapia, Cecilia; Robichaud, Jeffery
Subject: RE: discussion of air monitoring DQOs for barrier construction QAPP and RP workplan (303DD2 0714BD00)



DQOs-Draftv1.1....

We will use the attached document for our discussion at 2 pm.

-----Original Appointment-----

From: Hayes, Scott
Sent: Tuesday, June 10, 2014 8:51 AM
To: Hayes, Scott; Monnig, Rob; Johnson, James; Nold, Eric; Phillips, Todd; Davis, Michael; Gravatt, Dan; dkinroth@seagullenvirotech.com; Tapia, Cecilia; Robichaud, Jeffery
Cc: Beringer, Mike
Subject: discussion of air monitoring DQOs for barrier construction QAPP and RP workplan (303DD2 0714BD00)
When: Monday, June 23, 2014 2:00 PM-3:00 PM (UTC-06:00) Central Time (US & Canada).
Where: R7-RO1.2-N08-40/R7-RO, call-in 866-299-3188 code 913-551-7670

For June 23 meeting: ENSV will present their issues paper coming out of the June 12 meeting re: EPA and RP DQO/QAPP synchronization.

Also present proposed Project Organization chart to manage command, decision-making, and communication flow.

Results of this discussion will advise a revision to the originally proposed schedule below.

Target date for discussion of comments from ENSV.

- Step 1 – SUPR comments (hard copy only - not yet completed)
- Step 2 – START revise based on SUPR comments (not yet started) by June 16
- Step 3 – ENSV (Todd and Mike) review and comment on version 2 (hard copy only - not yet started)
- Step 4 – discuss ENSV comments by June 24
- Step 5 – START revise based on ENSV comments
- Step 6 – route for concurrence (electronic copy) by July 1

0714

40494574



Superfund

3.0

0401

Making Decisions About Airborne Contaminants During Isolation Barrier Construction

Step 1: State the Problem

Describing the problem. The problem is that a process needs to be developed to make timely decisions (define), on a location by location basis, whether airborne contaminants released and/or generated during construction of the isolation barrier at the West Lake Landfill Operable Unit (OU-1) are reaching receptors above levels of health concern.

What is the timeframe for decisions?

Establishing the planning team. The planning team includes....(who will lead the team and be the decision-maker), Scott Hayes (SUPR), Jeff Field (SUPR), Dan Gravatt (SUPR), Eric Nold (SUPR), James Johnson (SUPR), Chuck Hooper (SUPR), Mike Beringer (ENSV), Mike Davis (ENSV), Todd Phillips (ENSV), Rob Monnig (TetraTech), and ????. Others who may be consulted during the planning process include Casey McLaughlin (ENSV), others???

Who is the ultimate decision-maker?

Describing the conceptual model of the potential hazard.

The West Lake landfill is known to contain radiologically-impacted materials (RIM) that were mixed with soil and used as daily cover material. In addition, the landfill contains municipal solid waste, as well as construction and demolition debris. During construction of the isolation barrier, removal of material from the landfill may result in particulate matter containing RIM, VOCs, and hydrogen sulfide being released to the ambient air. These materials may travel large distances off-site to receptors located in the surrounding area, including residential receptors to the south of the site at the Spanish Village subdivision and to the east at the Terrisan Reste mobile home park. These receptors could be exposed to airborne contaminants via inhalation above levels of health concern.

Identifying the general intended use of collected data. The collected data will be used to make a decision whether airborne contaminants are present above a level of the health concern and what steps are necessary to protect public health. Measurement of airborne contaminants will need to represent an average concentration over a work day and over the entire construction phase??

Identifying available resources, constraints, and deadlines. The five off-site ambient air monitoring stations in the baseline monitoring network will be used during construction of the isolation barrier. These stations include particulate air samplers, RAE Systems AreaRAEs, Saphymo GammaTRACERs, E-Perm radon detectors, and thermoluminescence dosimeter. The five locations were selected to ensure coverage around the perimeter of the West Lake Landfill and are placed in areas near residential populations. The planning team determined that an approved ambient air sampling plan needs to be in place to ensure the plan can be implemented before construction activities begin, which is projected to occur on?? The planning team has also determined that USEPA On-Scene Coordinators and contractors will perform the sampling. USEPA will contract with a laboratory that is qualified to perform the analysis using techniques that will be specified in Step 3 to determine airborne contaminant levels and report results within what timeframe?

What date is construction of the isolation barrier projected to begin?

Step 2. Identify the Goal of the Study

Specifying the primary question. The primary question to be addressed is the following:

Are there contaminants being released into the ambient air from the West Lake Landfill during isolation barrier construction activities that exceed a level of health concern?

Determining alternate actions.

- Stop all construction activities.
- Inform community of results and shelter in place until air concentrations decline.
- Take no action.

Specifying the decision statement. Determine whether ambient air levels of contaminants of concern exceed a level of health concern and are attributable to the West Lake Landfill.

Step 3. Identify Information Inputs

Identifying the type of information that is needed to resolve the decision statement. This is a new data collection effort, with analysis being conducted on ambient air during isolation barrier construction. The planning team has decided to measure RIM, hydrogen sulfide, VOCs, and particulate matter??

To resolve the decision statement, the planning team will need data that represent 8-hour average concentrations and long-term (define) average concentrations. This information is required for comparison to the risk-based action levels. The planning team will also need to know wind direction and speed at each of the five off-site monitoring locations and in the isolation barrier construction area. In addition, monitoring results from the West Lake Landfill are needed to determine whether detected airborne contaminants off-site are attributable to the ongoing construction activities.

- Why are we monitoring for CO, SO₂, particulate matter and VOCs? Facility QAPP notes that the baseline risk assessment did not identify VOCs as chemicals of concern at the site.
- Which subset of VOCs from TO-14/15 should we look for?
- Facility is monitoring VOCs using Radiello Code 130 chemical absorbing cartridge diffusion samplers for 28 days while we are currently using 24-hour Summa canisters on a weekly basis.
- Is the facility monitoring for radionuclides in the same manner as we are?
- How many met stations are needed? Is dependent on the topography of the landfill.
- How will the facility's data be reported?

Identifying the source of information. Data from the ongoing baseline monitoring effort will provide information on RIM, hydrogen sulfide, VOCs, and particulate matter. This information, along with monitoring conducted by the State of Missouri, will be used to determine the final list of COCs in the sampling plan??

How will the data collected during baseline monitoring be assessed and used to inform decisions as we move into Phase 2?

How much baseline monitoring data needs to be collected in order to support informed Phase 2 decisions?

Identifying how the action levels will be determined. The action levels will be selected so that they are consistent with the duration of the construction activity. They will be established to account for inhalation exposure over an 8-hour workday, as well as repeated exposure over the entire construction period. For radionuclides.....? For other contaminants, action levels will be consistent with USEPA risk assessment guidance and policies. The 8-hour values will be based on peer-reviewed sources, including Acute Exposure Guideline Limits (AEGLs), Minimal Risk Values (MRLs), National Ambient Air Quality Standards (NAAQS), and other appropriate sources. The longer-term values will be derived assuming a sub-chronic exposure duration??

What is the time-frame for radionuclides?

Need to know the duration of construction activity before establishing action levels that are protective of repeated exposure.

Identifying appropriate sampling and analysis methods. Sample and analytical specifications must be appropriate to ensure that measurements can be quantified at levels below the action levels that will be used.

What about turn around time?

Step 4. Define the Boundaries of the Study

Specifying target population. The target population consists of all continuous monitoring results and ambient air samples sent to a laboratory for analysis. Thus, the target population is highly dependent on the locations which are represented by the existing off-site network. The planning team must determine the extent to which these locations adequately represent the variety of atmospheric conditions that are present at locations adjacent to the landfill.

Specifying spatial and temporal boundaries and other practical constraints. In terms of spatial boundaries, all monitoring and sampling results cannot be extrapolated beyond the actual five locations. The temporal boundaries are the time period each day when construction activities are actually occurring. Continuous monitoring for RIM, hydrogen sulfide, and particulate matter will be conducted because airborne levels will fluctuate based on concentration at the source, wind speed, and wind direction. Samples for VOCs will need to be sent to a laboratory for analysis because a cost-effective method is not available to achieve the action levels. Given that the baseline monitoring network has already been established, a potential practical constraint is the continual valid operation of the samplers within the monitoring network.

How will we manage the RIM results?

What is the turnaround time for VOCs?

Specifying the scale of inference for decision making. A decision unit corresponds to one of the five monitoring locations.

Step 5. Develop the Analytic Approach Step (choose action levels that sets the boundary between one outcome of the decision process and an alternative, and verify the detection limits are adequate)

Specifying appropriate population parameters for making decisions.

Need to define this for RIM and other contaminants (e.g., mean, median, or percentile)

Need to define this for 8-hour exposure and repeated exposure scenarios.

Specifying the action level.

Need to define for radionuclides.

Need to define for 8-hour exposure and repeated exposure scenarios.

Specifying the theoretical decision rule.

If....then....

Step 6. Specify Performance or Acceptance Criteria

Step 7. Develop the Plan for Obtaining Data